Amendments to the Claims.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method of producing a radiolabelled gallium complex in a form suitable for use in PET or SPECT radiopharmaceutical imaging, said method comprising ~~by~~ reacting a Ga^{3+} radioisotope in a suitable solvent with a macrocyclic bifunctional chelating agent, wherein said macrocyclic bifunctional chelating agent is linked to a targeting vector selected from the group consisting of proteins, glycoproteins, lipoproteins, polypeptides, glycopolypeptides, lipopolypeptides, peptides, glycopeptides, lipopeptides, carbohydrates, nucleic acids, oligonucleotides or small organic molecules;
   characterised in that the reaction is carried out using microwave activation at 80 to 120 W for 20 s to 2 min.

2. (Previously presented) The method according to claim 1 wherein the Ga^{3+} radioisotope is selected from the group consisting of $^{66}Ga^{3+}$, $^{67}Ga^{3+}$ and $^{68}Ga^{3+}$.

3. (Previously presented) The method according to claim 1 wherein the Ga^{3+} radioisotope is $^{68}Ga^{3+}$.

4. (Cancelled)

5. (Previously presented) The method according to claim 1 wherein the macrocyclic bifunctional chelating agent comprises hard donor atoms, preferably O and N atoms.

6. (Cancelled)

7. (Cancelled)

8. (Previously presented) The method according to claim 1 wherein the target vector is a peptide or oligonucleotide.

9. (Previously presented) The method according to claim 1 wherein the microwave activation is carried out at 90 to 110 W.

10. (Previously presented) The method according to claim 1 wherein the microwave activation is carried out for 30 s to 90 s.

11. (Previously presented) The method according to claim 3 wherein the $^{68}Ga^{3+}$ is obtained by contacting the eluate from a $^{68}Ge/^{68}Ga$ generator with an anion exchanger and eluting $^{68}Ga^{3+}$ from said anion exchanger.

12. (Previously presented) The method according to claim 11 wherein the $^{68}Ge/^{68}Ga$ generator comprises a column comprising titanium dioxide.

13. (Previously presented) The method according to claim 11 wherein the anion exchanger comprises HCO_3^- as counterions.

14. (Previously presented) The method according to claim 11 wherein the anion exchanger is an anion exchanger comprising quaternary amine functional groups, or the ion exchanger is a anion exchange resin based on polystyrene-divinylbenzene.

15. (Previously presented) The method according to claim 1 for the production of ^{68}Ga-radiolabelled PET tracers.

16. (Withdrawn) Method according to claim 11 wherein the eluting $^{68}Ga^{3+}$ is in the picomolar to nanomolar range after the elution, and more preferably in a nanomolar to micromolar level.